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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/548,407

09/08/2005

Chiaki Yokoyama

TAN-354

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7590

06/23/2009

HAHN & VOIGHT PLLC
1012 14TH STREET, NW
SUITE 620
WASHINGTON, DC 20005

EXAMINER

WANG, CHUN CHENG

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

06/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/548,407	Applicant(s) YOKOYAMA ET AL.	
	Examiner Chun-Cheng Wang	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the Amendment filed on 06/10/2009. Claims 2 and 6-11 are cancelled. Claims 1 and 3-5 are now pending.
2. The objections and rejections not addressed below are deemed withdrawn.
3. The text of those sections of Title 35, U.S. Code not included in this section can be found in a prior Office Action.

Continued Examination Under 37 CFR 1.114

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/10/2009 has been entered.

Specification

5. The Specification is objected due to errors in the a mM/b mL ratio in TABLE 4. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boudreau et al. (WO 02/34863 A1).

The rejections stand as per the reasons set forth in paragraph 4 of the previous Office Action, incorporated herein by reference.

Regarding the newly added limitation: Boudreau et al. is silent on $0.05 \leq a/b < 1.0$.

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The ratio of a/b is the ionic liquid absorption characteristic for each and specific pair of particle/ionic liquid and aqueous medium, at the point of complete extraction of particles the higher a/b ratio the better the specific ionic liquid performs for the given amount of particles and aqueous medium, i.e. less amount necessary added to remove or extract the particles.

The caselaw has held that “Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955.) Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to achieve the claimed ratio a/b by routine optimization, e.g. finding the right ionic liquid, and thereby obtain the present invention.

Response to Arguments

7. Applicant's arguments filed 06/10/2009 have been fully considered but they are not persuasive.

8. The declaration under 37 CFR 1.132 filed 06/10/2009 is insufficient to overcome the rejection of claims 1 and 3-5 based upon Boudreau et al. (WO 02/34863 A1) under 35 U.S.C. 103(a) as set forth in the last Office action because: facts presented are not germane to the rejection at issue. It include(s) statements which amount to an affirmation that the claimed subject matter functions as it was intended to function. This is not relevant to the issue of nonobviousness of the claimed subject matter and provides no objective evidence thereof. See MPEP § 716. In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

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9. The Applicants arguments “an aqueous medium by adding an ionic liquid. Where a/b is in the claimed range of $0.05 \leq a/b < 1.0$, the fine particles are transferred to the ionic phase, such that the aqueous dispersion becomes transparent and the particles are completely recoverable in the ionic liquid.”.

Response: The claimed method requires only to transfer particles from aqueous medium to ionic liquid in the claimed a/b ratio range. Attention is drawn to Example 5 that the a/b ratio in TABLE 4 is in 13.3-10 range for perfect particles recovery. There are not particles recovering rate or performance limitation related to the a/b ratio in the claim. It would be obvious to do routine experiment and obtain the claimed a/b ratio range, barring the showing of the evidence of unexpected results. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the particles are completely recoverable in the ionic liquid in the a/b ratio of $0.05 \leq a/b < 1.0$) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Cheng Wang whose telephone number is (571)270-5459. The examiner can normally be reached on Monday to Friday w/alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ling-Siu Choi/
Primary Examiner, Art Unit 1796

/Chun-Cheng Wang/
Examiner, Art Unit 1796

/CCW/